

Levick (J. J.)

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TYPHOID FEVER

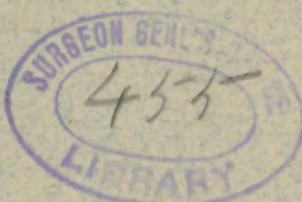
AND

ITS TREATMENT

BY

JAMES J. LEVICK, M.D.

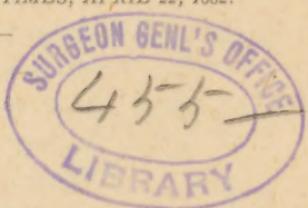
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REMARKS
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THIS little essay on Typhoid Fever was written for *The Philadelphia Medical Times*, in which it was printed April 22, 1882. It was favorably received, and all the separate numbers printed at that time have long since been disposed of. To enable the author to comply with requests for copies of it, which are still made by former pupils and other partial friends, it is now—by permission of the owners of *The Medical Times*—reprinted.

J. J. L.

PHILADELPHIA, 1200 Arch Street,
October 24th, 1884.

A DISTINGUISHED English physician, in one of his most valuable papers, has recently said, that "the sum of his own experiments constitutes each man's experience, to which, in proof of the correctness of his practice, he appeals as to a judge, whose decision is final and infallible. . . . And yet," he adds, "how different are the conclusions, all based on experience, drawn by different observers, in regard to the effects, on any given disease or symptom, of any given remedy." Notwithstanding all the various sources of error, he intimates that it is the duty of those who have had opportunities for the observation and study of disease to give to others the results of that observation and study. This, then, must be my apology, for venturing to offer these remarks on a subject so well known to the profession as typhoid fever is.

The adoption of the word "typhoid," and its retention for an independent fever, curiously illustrate the earnestness with which the theory of the distinct character of this fever was resisted. It was indeed a compromise with those who still claimed that, if it were not the true typhus fever, it was very closely allied to it. The nomenclature of disease is, however, not an exact science; and I have taken much comfort in a fact I have recently discovered, that, primarily, at least, the Greek word *τυφος* means not *stupor*, as has been taught from the days of Hippocrates, but *smoke*, *mist*, *cloud*, and, dismissing from the mind all thoughts of typhus fever, have been glad to find in *typhoid*, *smoke-like*, a word which aptly describes the obscured, misty, clouded mental atmosphere which belongs to this disease.

It is unnecessary here to dwell on the causes of typhoid fever; but I cannot avoid expressing my conviction that there has not been that value attached to a peculiar susceptibility to this dis-

ease, oftentimes inherited, which I believe is a very potent factor in its development. This tendency or susceptibility has not entirely escaped the notice of writers on typhoid fever, but it has never had that general recognition which it deserves. I have myself no more doubt of such a susceptibility in some families, than I have of a tendency in others to phthisis. Indeed, it often happens that this susceptibility is found in families in which the tendency to phthisis exists. I have known a family in which three of its members have died of consumption, and two others, escaping consumption, have been very ill with typhoid fever. Again, it has happened to me to attend three generations of a family in which the liability to typhoid fever is a very marked one,—viz., the mother, her three sons, and her grandson. That this was not referable to any one local cause, was shown by the fact that, with a single exception, these cases occurred in long intervals of years, in different houses, and in different parts of the city. Of the brothers and sisters of the mother here referred to, and their descendants, I have a record of twenty-three who have had typhoid fever, and this has occurred to them in different cities, in different States, in town and in country, and under the most favorable social and hygienic conditions.

My attention has been especially drawn to these cases, from the fact that the parents were personal friends of my parents, and that they and their descendants had the same social and hygienic surroundings that my own parents and their descendants had; and yet in the one family there have been twenty-three instances of typhoid fever, and in the other but one.

It is impossible for me to believe that, of the one family twenty-three have been especially exposed to the specific poison of typhoid fever, while in the other there has been but one such exposure. I am irresistibly led to one of two conclusions,—either that all are exposed to this poison, which some are always able to resist, or that there exists in some individuals and in certain families an especial susceptibility, I had almost said, a predisposition, to this disease. Be the state of things what it may, this liability to typhoid fever should always be inquired into, as an aid in the early diagnosis of the disease.

It is not the purpose of this paper to consider in detail the various phenomena of typhoid fever, this has been done by the writer elsewhere;¹ but so deeply impressed is he with the importance of the early recognition of *the red spot*,—the characteristic eruption,—that he desires strongly to urge the necessity of a very thorough search for it. The physician should not be content with merely looking at the abdomen, where the books tell us it is to be seen, but he should examine the back, the arms, the legs, and the chest. The truth is, there is scarcely a part of the body where it may not occasionally be found. In my own observations, I think I have most frequently first seen it on the right hypochondrium, over the articulation of the cartilage of the eighth rib.

It is, indeed, of vital importance that the physician should make himself familiar with the nature and appearance of this pathognomonic eruption, should understand that it is entirely unlike the rubeoloid eruption of typhus, and the petechiæ which are so often mixed up with this,—that it is not an extravasation, but a local hyperæmia; that it therefore disappears on pressure, promptly to return when that pressure is removed. All these facts must be carefully considered, and, thus thoroughly acquainted with it, a single spot determines at once the diagnosis, and may save the patient from a course of medication unsuited to him, or in very mild cases may prevent the sick man from incurring such exposure as might suddenly prove fatal to him.

During the war of the Rebellion, a member of the medical staff of the Satterlee Hospital, very zealous and faithful in the discharge of his duties, had for a week suffered from debility and general malaise, with the merest trace of fever. Prompt to detect disease in others, he was less careful with himself, and supposing that he merely needed rest and change of air and scene, had his trunk packed and his arrangements made for a visit to New York. A medical friend calling to see him the night before his proposed journey, not being satisfied with the history of his symptoms, made a careful examination, and found a single but unmistakable *red*

¹ Medical and Surgical Reporter, June, 1862. American Journal of the Medical Sciences, April, 1864.

spot. The journey was stopped, the patient put to bed,—a mild but positive attack of fever ensued, from which recovery happily followed. The recognition of this single spot, it is quite probable, saved to the profession a life which has since been of much value to it.

It is generally stated in the books, that there is no relation subsisting between the abundance of the eruption and the gravity of the disease. This may be true, but I always regard the occurrence of a copious eruption as a favorable symptom. I am not prepared to announce it as a law, but, so far as my observation goes, I have never known serious disease of the bowels to exist in this fever when there was a copious skin eruption. The converse of this proposition does not hold, as a single spot may also be associated with a very slight disturbance of the bowels.

A marked example of a very copious eruption has, within a few weeks, come under my notice. It occurred to a physician of a neighboring county, who, while having under his care a large number of typhoid-fever patients, became himself the subject of the disease. I saw him, in consultation with three of his medical friends, in what seemed to be the close of the second week of the fever. The eruption was an abundant one, and for the most part eminently characteristic; but with the ordinary isolated lenticular spots were several unusual eruptions. These last were circular patches about half an inch in diameter, and of a pale-pink color. A close examination showed that these circles were formed by the aggregation of individual lenticular spots, and that in this aggregated form they lay side by side, radiating as it were from a common centre,—that, in other words, they were not distinct, but confluent. I had never seen such a grouping, and should have been puzzled as to its significance, had there not been so many spots of the usual character elsewhere.

A careful watch for, and study of, *the red spot* may prevent an error of diagnosis, which has more than once occurred. Reference is now made to the occurrence in the summer-time, during, perhaps, an epidemic of diarrhoea or dysentery, of a mild case of typhoid fever, whose only obvious symptom is looseness of the bowels. Such a case might readily be regarded as one of the pre-

vailing epidemic. The habit of examining the abdomen for the spot of typhoid fever in every case of diarrhoea would prevent such an error of diagnosis.

It is well to bear in mind, also, that diarrhoea is not always present in the early stage of typhoid fever; while, on the other hand, the fact that the bowels in a case of fever are *not constipated*, should always excite suspicion as to its nature.

Recent apparatus and observations have given much greater accuracy than formerly to the study of the temperature in this disease, and the thermometer is now as much employed in this as is the stethoscope in the study of cardiac disease. No one who has learned its value will be likely to lay it aside, and yet there are occasions in which the thermometer is not available. Sometimes it is forgotten and left at home, sometimes the index becomes immovably fixed in the tube, sometimes the thermometer is accidentally broken; there are some patients who are alarmed, and others who are nauseated by its use. In the high delirium and fierce jactitation which are sometimes present, the use of the instrument is almost impossible. Hence, it is a matter of importance that the graduate in medicine should early learn to notice the relative temperature of the body, should be able to recognize —when he takes his patient's hand in his own—by the feel of the skin, by the heat, dryness, or moisture of the surface, what the febrile state then is. The *tactus eruditus* is, indeed, as necessary for the practitioner of medicine as it is for the obstetrician or the gynnæcologist.

I pass by the ordinary symptoms of this disease, all of which are so well described in the books, pausing merely to say that early, persistent headache, even though it be but moderate, with an elevation of temperature and a tongue lightly coated, should always be regarded with suspicion, especially so if with these the patient reports that his bowels are loose, or that they are "regular."

Perhaps I may here say that, next to remittent fever, the two diseases which have given me most trouble in the early differential diagnosis of typhoid fever have been, tuberculous meningitis in children and influenza, or, as it should be called, epidemic ca-

tarrhal fever, in adults. Of course, this difficulty can occur only in the very early stage of the disease, before there has been time for the eruption to appear.

When called to a case of typhoid fever, my own practice is always to explain to those having the care of the sick, that the great dangers in this disease are from hemorrhage and from perforation of the bowel. I generally take an old cambric handkerchief and show to the nurse what such a perforation is, and how, from improper food, it may occur. Such an illustration doubtless adds to the anxiety of the nurse, but it also adds to the safety of the patient; and it is better to be temporarily anxious than to be permanently bereaved.

Without doubt, the safest and best diet for the typhoid-fever patient is milk, but milk is not altogether without its dangers.

Much attention has of late been called, in the English journals, to the importance of giving milk in small quantities at a time, and it is referred to as though it were a new observation or discovery of these writers. Those who sat under the teachings of the late Professor Wood, well know that the caution against large draughts of milk was always given in his lecture on typhoid fever. In his work on the *Practice of Medicine*, printed in 1847, he says, that milk should be given only "in small quantities, and frequently repeated." The discomforts from milk are not imaginary: I have more than once seen a hard, tough coagulum vomited after a copious draught of milk, and have known much pain follow accumulations in the bowels from its prolonged use; but I still think that, rightly administered, it is altogether the safest and best diet for the fever-patient. Sometimes it is well to boil it, and in many instances the addition of lime-water is useful.

For beef-essence I have a kindly regard for the good I once thought it did, as one has for a friend of his early life, even though that friend may have failed him in later years; but I am thoroughly convinced that a sick man cannot live on beef-essence alone. It may be, and when given hot and strong, it doubtless is a grateful stimulant, and, as an adjuvant, comes in nicely; but, if the patient is not to be starved, it must be supplemented by milk. When it is used, I prefer that it should be made at home. Of the

prepared articles substituted for this, I decidedly prefer Johnston's Fluid Beef.

I cannot too strongly commend to those of the profession who may not have seen it, an admirable little essay by Dr. John F. Meigs, *On the Internal Use of Water for the Sick, and on Thirst*. Its author justly says, that it is absolutely necessary that the fever-patient should take freely of water, to reduce the temperature and to compensate for the unusual combustion of tissue which is going on: that his attendant should not wait for him to ask for the water, but should frequently and systematically give it to him. I believe that, if this were done, we should see fewer cases than we now do of a dry tongue and a hot, burning skin. In this connection I may here say, that I think we have rather lost, than otherwise, by giving up the use of wine-whey, which, it seems to me, is much less used now than it formerly was. I do not attach much value to the nutritive qualities of the whey, nor is there much stimulant in the small quantity of alcohol,—though there is some: but its regular, prolonged use supplied a liquid which easily and promptly passed, by a dialytic action, into the blood, and thus helped to compensate for the loss of fluid from the blood and the tissues.

It must, of course, be left to the judgment of the physician to decide in each case when, and in what form, alcohol becomes necessary. I confess to a preference for brandy for punch, rather than whiskey.

And here it may be well to call attention to the importance, in treating this disease, of strict attention to the particulars of that treatment. The care-taker of the sick should be told, that when milk-punch is ordered, in what proportions it should be made. These, it is true, vary with different physicians. For my own patients, I generally direct that one large tablespoonful of brandy should be added to four tablespoonfuls of milk which have previously been poured out and sweetened. To this, a tablespoonful of lime-water may sometimes be advantageously added. Champagne, so useful in many diseases, is often inadmissible in this, from its tendency to act on the bowels, causing or keeping up diarrhea.

It is sometimes necessary, especially in the country, to tell the

nurse, that wine-whey should be made from sherry or madeira, and not from claret or port, or from currant or other home-made wine; that ice should be pounded in a towel, and placed in a funnel lined with flannel, which is set in a pitcher deeper than the funnel, and the ice given to the patient from a spoon, and not in his fingers; that a poultice, to be of use on the abdomen or elsewhere should be a light one, covered with silk oil-cloth or gum-cloth, and not removed for many hours; and, that in case of sudden or alarming fall of temperature, or of sudden failure of heart-power, much help may be had from short stockings filled with hot salt, one of which should be placed in each hand of the patient.

These are little matters which, it will be said, should be known by every one, but, unfortunately in practice, we find that such is not the case.

When called to see a patient with a fever which is, at all, a suspicious one, I direct for him, if it can be had, a warm bath, (not a hot one); and I do so because of its soothing effect, and because I wish the skin to be in a condition readily to perform the unusual duties which must soon devolve upon it. The bath should be given, if the weather be cold, in a warmed bath-room, and the patient not permitted to make any exertion, and every precaution used against taking cold.

It rarely happens that cathartic medicines are needed, but, should they be, by far the safest of them will be found in syrup of rhubarb or castor oil, a dessert-spoonful of which will be sufficiently active. All hydragogue cathartics—such as podophyllin or the compound cathartic pill—must, of course, be studiously avoided. A teaspoonful of sweet spirit of nitre in a large wine-glassful of water will often, in this early stage, give the patient a quiet night, and the next morning will find him with little or no fever.

He should now have, in divided doses, fifteen or twenty grains of sulphate of quinine. Each physician has his favorite way of exhibiting this medicine, and I am no exception to the rule. I order twelve pills of three grains each to be made of quinine in which I have confidence,—Rosengarten's or Powers & Weightman's,—and the excipient I prefer is glycerin. A three grain pill

thus properly made is not a large one, and served from a box in which powdered arrow-root is used instead of the disgusting liquorice-powder, is altogether acceptable to the patient. Old quinine pills or sugar-coated ones I carefully avoid. One pill at ten o'clock, two at eleven, and two at twelve, are sufficient for the first day; indeed, in some cases the fifth pill may be omitted. Repeating the dose of nitre at bedtime, the following morning four pills, twelve grains, in divided doses may be given, and the next day three, which last number should be continued each day during the ensuing fortnight, unless some contra-indication show itself.¹

As the disease advances in its regular course, certain special phenomena show themselves, prominent among which is sleeplessness, with or without delirium. If the patient be a vigorous adult, I not unfrequently direct that at bedtime a little pill should be given him, containing *one-sixth of a grain of acetate of morphia and one-half a grain of the alcoholic extract of hyoscyamus*. This is generally sufficient to give a good night's rest, or, if it be repeated during the night, it should not be done in a shorter interval than that of four hours. It is true that it has rather a tendency to give a dryish tongue next morning, though the combination with hyoscyamus lessens the probability of this. When chloral was first introduced, I thought we had found just the right hypnotic for typhoid fever,—a good night's rest and a moist tongue,—and I used it freely; but one or two idiosyncrasies coming under my notice, in one of which ten grains were followed by stertorous respiration and flapping cheek, and in the other by injected eyes

¹ The susceptibility to the influence of quinine varies greatly with different individuals; and, unfortunately, there is a great difference in the quality of the quinine in the shops. Hence, it is important that the medicine should come from a reliable apothecary, and that it should be free from sugar, gelatine, or other coating. Taking these precautions, I have rarely found it necessary to use more than fifteen grains the first day, as mentioned in the text. Occasionally I give twenty grains, and not unfrequently continue to give twelve grains for some days. I write this, well knowing that some who read it will smile at what seems to them the insignificance of the dose. In very serious cases, approaching in their character the pernicious remittent form of fever, much larger doses will be required.—*Note to Reprint.*

and an aggravation of headache, made me more cautious in its use, and led me to prefer the combination I have mentioned. Bromide of potassium in moderate doses is at best but an uncertain remedy, while in large doses, sufficient to produce sleep, it is very apt in typhoid fever to irritate the bowels, and increase the diarrhoea.

Not unfrequently, in the course of the disease, there comes on a condition, in which the remedy proposed by the late Dr. Wood—the oil of turpentine—comes in so usefully. I am well aware that there are physicians who look upon this medicine as of doubtful efficacy, while there are others who, like myself, regard it as of much value in the treatment of typhoid fever. It was not in every case of this fever that Dr. Wood gave turpentine,—it is not in every case that it is needed. In his "*Practice*" he says:—"It may be employed in all cases in the advanced stages of this disease, when the tongue is dry, but there is a peculiar condition . . . in which I have seldom known it to fail; this is when the tongue, having begun to clean off, suddenly becomes quite dry again, and the process of cleaning is suspended, when there is an increase of tympanites, and an aggravation or, certainly, no abatement of the other symptoms." Doubtless, in such a condition it is pre-eminently useful; but I think it is best to anticipate this, and thus prevent the full development of the lesions of which this dry tongue is the expression. In a case now under my care, although the tongue remained moist, yet the lips had become dry and tense; and the turpentine was given with the hope of averting the dryness of the tongue, and with the most satisfactory results. And here occurred an illustration of the importance, in treating this fever, of attention to particulars. The emulsion was put up in a rural district, and the little patient complained greatly of the harsh, disagreeable taste. On examining it, I found it to be of a strong, resinous odor and a sharp, irritating taste. Dismissing this, and substituting for it the same prescription put up by one of the best pharmacists in the city, the whole character of the medicine was changed, and there was no further complaint of it by the patient.

The physician therefore, especially in the country, should see

to it that the turpentine used by him has not been exposed to the air, has not become resinous, and is exhibited in such a form as will not be disagreeable to the patient. It should always be given in emulsion, and not merely dropped on a lump of sugar, as is sometimes done. The formula below is that which I generally use:—

R.—Ol. Terebinthinæ. gtt. cxx.

Sacchari pulv. }
Acaciae " } $\frac{1}{2}$ ii.

Aq. Menthæ Pip. f. $\frac{1}{2}$ iii.

M et S.—A dessert-spoonful every two hours.

I have never agreed with Dr. Wood, that the turpentine in this disease acted directly on the intestinal ulcers; I believe its action to be a systemic, not a merely local one; but I do not yield to him in my estimate of its great value in the treatment of typhoid fever. Dr. Wood used to say of its dose, that, for an adult, less than ten drops every two hours did not profit much; that more than this, given night and day, was unnecessary.¹

So many medical men, in whose judgment I have confidence, attach great importance to the use of the mineral acids, and especially the hydrochloric, in the treatment of this fever, that I dare not doubt their value. I have, however, had but little personal experience in the use of them, and that little has not been of an encouraging character.

A grave complication, which comes on in the course of typhoid fever, is the very feeble condition of the muscle of the heart,—a condition which, so far as drugs are concerned, is best remedied by the exhibition of brandy and ammonia. I should be very loath, indeed, to rely upon, or to resort to, digitalis as a heart-strengthener in the advanced stages of this or any other exhausting fever, but should prefer to use what I have named, and tonic doses of quinine. Above all things else, it is here of importance that the

¹ In these days, when so much importance is attached to the germ theory of disease, it is, at least, an interesting coincidence that, in the investigations recently made on the efficacy of various medicines in destroying morbid germs, one of the most potent agents in this respect was *turpentine*. Its power as an antiseptic had long been recognized.—*Note to Reprint.*

patient keep the recumbent position, and avoid even a slight strain on the enfeebled cardiac muscles. Hence, he should not rise from his bed even to a commode, but should use the bed-pan. I am well aware that this last charge is attended with many practical difficulties, and I have never yet seen a china bed-pan of which the patient did not complain. Indeed, I have sometimes feared that much harm was done, by the unnatural position and straining required to use it. I therefore much prefer the hard-rubber article. Where this is not at hand, an excellent substitute may be found in the ordinary household dust-pan. This should be covered with an old towel, and may be readily slipped under the patient, the urinal having first been used.¹

Were this a treatise on typhoid fever, it would be proper to consider in detail the many suggestions which have lately been made with reference to its treatment. To one or two of these only I shall briefly refer.

The use of those measures which will directly reduce the temperature in high fevers has of late, and very properly, claimed much attention. Strictly speaking, it is the correction of the disturbed nervous action, which permits, determines, or develops this

¹ As stated on its first page, this little essay does not attempt to consider all that is of interest in the study of typhoid fever. One or two important matters, not mentioned in the text, may be here briefly noticed. The physician should daily, or oftener, himself ascertain the condition of the urinary bladder, and should carefully examine those parts of the body on which pressure is made. Where these show any discoloration, removal of the pressure, sponging the parts with a solution of Chloral in Soap Liniment,—twenty grains to the ounce,—and the covering of the parts with "*French paper*,"—"*papier Fayard*,"—will be found useful. In hypostatic pneumonia, a change of position, turpentine stupes externally, and carbonate of ammonia internally, will be the most efficient remedies. In persistent delirium, occurring in typhoid fever, sometimes fierce, sometimes low and muttering, the wet sheet might be of service. Other external treatment is found in a few leeches behind the ear, and a cantharidal blister to the nape of the neck. The little pill of morphia and hyoscyamus, mentioned in the text, will be found useful here, so, too, with the ammoniated tincture of valerian, Hoffman's Anodyne, and musk. Chloral and bromide of potassium are advised by many writers. Where the treatment recommended in this paper has been used from the start, I rarely see this typhoid delirium.—*Note to Reprint.*

elevation of temperature that is needed. The expression of that disturbance, as seen in the unnatural heat of the patient, is one of the obvious symptoms which may well claim attention. Hence, the external application of cold is often a very valuable part of treatment; directly, by reducing the temperature, and, indirectly, by preventing the lighting up of local inflammations which this great heat may develop. It is true that these effects are not always permanent, and that the treatment itself is not always without danger.

In that terrible form of heat-elevation, formerly described as *calor mordax*,—a temperature of 104° Fahr. and upwards,—which is often found in typhus, and sometimes, though more rarely, in typhoid fever, very decided antipyretic measures are demanded.

More than twenty years ago I called attention to the analogy which existed in the condition of the typhus-fever patient, when in this *calor mordax* state, and that which rapidly shows itself in cases of sunstroke.¹ As I have long held that, in this form of sunstroke, there is no treatment so efficient as the rubbing of the patient with large pieces of ice, or, if this cannot be done, by using copious affusions of cold water, so I believe that this high, biting-skin temperature of typhus may be most efficiently treated by similar ice-friction. In typhus there is comparatively little danger of organic inflammations; even the pneumonia which sometimes attends it is more hypostatic than acutely congestive. The duration of typhus is comparatively a short one, and so imminent is the danger to life that whatever is done must be done quickly. In typhoid fever, if the patient be treated from the start, the temperature rarely reaches this *calor mordax* state. Should it do so, the wet sheet or the cold-water sponging might well be used; and I can imagine very high temperatures in which the ice-friction might be permissible; but, as a rule, this last is uncalled for, and would in most cases be dangerous. There is, in typhoid fever, a strong tendency to the development of local inflammations,—as of the bronchi, the lungs, the abdominal viscera, and the great veins of the lower extremities. Typhoid fever does not rapidly tend to

¹ American Journal of the Medical Sciences, January, 1859.

death as typhus does, and neither demands nor justifies the extreme measures which are called for in typhus.

This little paper is written, not for the sick in hospitals or for their care-takers, who have about them all the appliances which science can suggest, and the experience which a great hospital alone can give; nor is it intended chiefly for the rich in great cities, who, in sickness as in health, have conveniences and luxuries which wealth can always command. Rather is it written with the hope that, in its details, which are given with much simplicity, a suggestion may here and there be found which will be of practical value to those medical men whose lot it is to practise their profession in remote country places, where they have no one to look to for counsel or for aid, and where they are compelled to care for the sick under many privations and, sometimes, amid the most unfavorable circumstances.

It is, indeed, one thing to prescribe for disease among one's books in the luxury of the study, and quite another thing to treat the sick man in his own home, face to face with him and his surroundings. Hence, it is little short of mockery to tell the practitioner in the country, where, relatively, typhoid fever is most prevalent, that it is best treated by daily or oftener placing the patient in the bathing-tub, when in not half of his patients' houses is a bath-room to be found. Indeed, under the most favorable conditions, I very much doubt if more harm than good is not done to the sick man, by the perturbation it occasions him to have his clothing pulled over his head and shoulders, himself lifted bodily by two often awkward and careless men into and out of the bathing-tub, rubbed, and his shirts then pulled on again; all of which has to be done, and, if Liebermeister's advice be followed,¹ six or eight times daily. As has already been said, a good, thorough ablation in the early stage, and frequent careful spongings, are both useful and necessary,—and there are cases of very high temperature in which the wet sheet may be used with advantage,—but

¹ The disfavor into which the active hydropathic treatment has fallen since the above was written, confirms the truth of what is said in the text.
—*Note to Reprint.*

more than this is rarely practicable or desirable. There is probably more to be hoped for in the so-called antipyretic dose of quinine than in an active hydropathy, though this, too, may be carried to an undue extent.

For the diarrhoea, which is often a troublesome and exhausting complication, remedies administered by the rectum, rather than by the mouth, will always be found most efficient. Of these, a suppository of one grain or of two grains of opium, or an enema of thirty or forty drops of laudanum in a tablespoonful of warm water, will generally be sufficient. Warm water is better than starch-water, and half an ounce will be retained when the quantity mentioned in the books—two ounces—would be rejected. Should additional medication be needed, we have in *paregoric* (tinct. opii camphorata, U. S. P.) a good, honest, old-fashioned medicine, which has stood the test of time, and comforted many a one, I had almost said, from his cradle to his grave. This is really one of the very best preparations for internal exhibition in the diarrhoea of typhoid fever. Especially adapted to children, it is also admirably suited to adults,—is safe, grateful to the stomach, mildly astringent, and, indeed, fulfills many indications, one of the most valuable of which is found in its soporific effect.¹

¹ There may, perhaps, without impropriety, be here mentioned a case in which the good effects of paregoric were very marked. A little boy, six years old, came under my care in April, 1880. He was near the end of the second week of his illness, and had, up to that time, been under the care of a homeopathist, who, I was assured, had confined his diet to gum-water with the occasional eating of white grapes. The symptoms had become so alarming that the homeopathist was dismissed, and, with great reluctance, I consented to take charge of the case. It would, indeed, be difficult to undertake a more unsatisfactory charge. The lad was greatly emaciated, his pulse a mere thread, his blood so impoverished that his knees, where they touched each other, and the elbows, from pressure on the bed, had become ecchymosed. For five nights there had been persistent insomnia. There was no unmistakable *tache rouge*, but there were diarrhoea and decided delirium. I never felt more deeply the responsibility which rested on me, not only towards the lad and his family, but also towards the profession, which this change of treatment in the middle of his illness imposed.

I first saw him at 8 P.M. What real treatment, if any, he had here-

I have said that paregoric is a safe remedy, and this is a great recommendation: for, valuable as opium is, it is sometimes a very dangerous medicine in this or any other disease of great debility. I have often thought that much harm has been done by the popular-professional teaching, that "opium is a stimulant." In one sense of the word, perhaps, it is so. In small doses, given in health or in slight deviations from it, it may quicken mental action, brighten the intellect, and the heart's movements for a time may even seem stronger; but the temporary stimulation thus developed is a very different thing from that which is produced by alcohol, by ammonia, or by tonic medicines. In most cases it is rapidly followed by a grave exhaustion. Especially is this true of morphia, which, calming the brain and benumbing the great centres of respiration and circulation, may easily lull a feeble patient into a sleep which, this side of the grave, knows no waking.

There are derangements of health, occurring to persons ordinarily strong and vigorous, which not only bear but require active treatment, and in which the healthy condition can be restored only by the exhibition of decided doses of medicine. These come to be regarded, and perhaps justly, as the typical doses of the medicines used, and are taught to the student in the lecture-room, and accepted by him as such. There are, on the other hand, times in the course of disease when the forces of death and of life are so evenly balanced that, as it were, the weight of a feather may fatally depress the beam. At such a time, he who watches the balance must see to it that by no act on his part shall that fatal feather's weight be placed there.

tofore had could not be learned; but it was imperative that something should be done for the night; and so, after giving the little fellow some brandy-and-milk, I could see my way clear to give him nothing more than thirty drops of paregoric with twenty of sweet spirit of nitre, to be repeated in two hours' time if he did not sleep. It was an immense relief to learn next morning that the second dose had been followed by a quiet and refreshing slumber, and that the little patient's condition had greatly improved. The case proved to be yet a very serious one, and required some weeks of close watching before entire recovery took place, in which I had the judicious counsel of Dr. J. F. Meigs; but to this day the family of my little patient have a grateful regard for paregoric and nitre.

In the course of an exhausting fever, in the case of an emphysematous or greatly diseased lung, in a dilated and feeble heart, such a fatal weight may be found in one-half or even in one-fourth of a grain of morphia, in twenty grains of chloral, in a two-grain extract of opium suppository, and in a half a grain or less of morphia given hypodermically. The physician who prescribes from a thoughtful recognition of his patient's condition, and not merely from the books, will adapt his dose to that patient's condition, and will not, by paralyzing the medulla, further cripple a heart and lungs whose nerve supply is already nearly lost. I trust I shall not be deemed querulous when I add, that I have sometimes been amazed at the doses of opium, morphia, chloral, and salicylic acid which I have known prescribed, not only for the young and vigorous, but also for the old and feeble patient. It is so much better to give a small and safe dose, which may be repeated if necessary, than to give what, though regarded as the ordinary dose, may be a fatal one to a patient greatly enfeebled by age or disease.¹

Perhaps such caution will be deemed excessive, and be regarded as a timidity of practice which is characteristic of age. I well know that increasing years bring with them an increased consciousness of the value to a family of the life of each member of it, and a deepened sense of our responsibility to those who intrust their lives to our keeping; but I cannot regard any watching as too great, or

¹ In the American Journal of the Medical Sciences, (1863,) Vol. 41, (N. S.) page 87, is a paper by the writer of this essay, on *The Hypodermic Injection of Morphia as a New Form of Medication.* Notices from foreign journals had been copied into our own, but so far as I am aware this was the first American paper on this subject which appeared here. In it the hypodermic injection is commended, and its use strongly urged.

In the long interval which has elapsed between that time and the present, the writer has lived to see the hypodermic medication adopted to an extent which its most zealous advocate could not then expect. And now, in later life, while giving it its full value, he feels bound to enter his protest against that reckless use of the hypodermic syringe which, he fears, prevails at this time. Especially would he advise his younger medical friends to avoid the use of injections of morphia where relief can be had by other means, and earnestly would he caution them against the hypodermic injection of morphia in patients who are old or feeble, or both.—*Note to Reprint.*

any caution as excessive, which may save children from the dreary uncertainties of orphanage, or parents from that loneliness of hearth and of heart which belongs to a childless old age.

Hemorrhage from the bowel is regarded, next to perforation, as the great danger of typhoid fever; and, when it does occur, it is certainly a grave symptom. I cannot but think that, in this country at least, it is not of such frequent occurrence as has been supposed. It has happened to the writer, in public and in private practice, to see a good deal of typhoid fever, but, excepting in the Chickahominy cases, he has never had a hemorrhage occurring in the course of this disease. He does not claim this exemption as anything else than his good fortune, though he has a hope that the early exhibition of turpentine has had its value in preventing this accident.

He cannot, therefore, speak from experience, but, *a priori*, he would expect benefit from the exhibition of Monsel's solution of iron, fifteen drops in a large wineglassful of sweetened water every hour or two, or, if this be not tolerated, a pill of acetate of lead, gr. ii., opium gr. $\frac{1}{2}$, every two hours. This may be supplemented in some cases by turpentine stupes to the abdomen; in other cases by ice to the abdomen, and by astringents in the rectum.

When convalescence has been established, there comes a time when there is no longer a loathing of food, even though the appetite may not be fully developed. One is sometimes almost at his wit's end to suggest a dietary suited to the capricious appetite of his patient. Not knowing where to find such a dietary, I venture to put on record here what I have found to be safe and palatable.

The diet having consisted chiefly of milk, a wineglassful of cream may now be substituted, and, as an approach to solid food, there may be dipped into this and eaten the little flat sponge-cake known as the "lady-finger," but which, from its shape, might be better called "lady's-sandal," and which must not be confounded with the unwholesome cake known as the *croquant*. Next in the ascending scale we may allow vanilla ice-cream, taking care that it be fresh and sweet. For those who like it, chocolate cream may after a time take the place of vanilla, and a cup of cocoa may be taken at breakfast. A little later, the yolk of a soft-boiled egg

may be eaten, or that of one boiled for a long time and broken up with the bowl of a spoon into powder. A potato, baked with the skin on, may, perhaps, be now allowed, with a little butter and salt. Nutritious soups may also be given, but, even at this stage, it is best to strain them. A thin piece of roast beef, or the tenderloin of steak, may next be chewed, but not swallowed. A little later, the white meat of poultry, finely cut up, may be eaten; but small birds, especially reed-birds or rice-birds, should be avoided, on account of the danger from the little bones, fragments of which have sometimes been fatally swallowed. Oysters roasted in the shell are very appetizing, and, when convalescence is fully established, may safely be taken. Various dishes usually taken at dessert—floats, cup-custards, jellies, Spanish cream, and the like—may safely vary the *menu*.

Later in the convalescence there comes a fierce appetite, which needs curbing rather than urging.¹

In the *London Lancet*, November 15, 1879, there is an admirable paper by Sir William Jenner, on the treatment of typhoid fever. It is marked by such modesty, and by such real merit, that it is with extreme reluctance I venture in any way to object to it. But I cannot, in justice to my own convictions, refrain from expressing my dissent from that portion of it, which forbids the removal to his home of the typhoid-fever patient who has been taken ill while away from that home. I am the more compelled to refer to this, because the advice has been adopted and repeated by the author of the best American treatise on typhoid fever which has for many years appeared among us.

Whoever has known, in himself or one of his family, what it is to be ill away from home, at the sea-side or at a distant moun-

¹ The latest madness in medicine is seen in the attempt to undervalue the importance of strict attention to diet in typhoid fever, and cases are exultingly reported in which recovery has taken place where this has been disregarded. And yet every physician of large experience must have seen, in hospital or private practice, more than one fatal result from neglect of his advice in this respect. It is, indeed, the most important matter in the care of the typhoid-fever patient, and cannot be too carefully attended to.
—*Note to Reprint.*

tain-resort, knows what, even under the most favorable circumstances, such an absence implies. There is to the sick man himself the dreary, depressing consciousness of being away from his home, which he may never again see, the absence of his home comforts, the difficulty of obtaining the needed medicines, the greater difficulty in promptly getting his own physician, except at great cost or at great personal sacrifice on the physician's part; while with the family there is the very serious inconvenience of being with the sick man, or the distress of separation, heightened by the daily and often unsatisfactory telegram. And when, after weeks of such anxiety and discomfort, there comes the dreaded message that the end is at hand, there is the hurried journey to be made to the dying, and the sadder homeward journey with the dead. Surely one, who has known all or aught of this, will admit that it is far better to bring the sick man to his home, even though his safety might be somewhat risked by it. But I confidently assert that, so far from his safety being endangered by it, in the large majority of cases the patient's chance of recovery will be increased by the removal and its consequences.

It is a very different thing to travel in an English railway carriage and to make a journey on one of our railroads, with its drawing-room and sleeping-cars, where one may be almost as comfortable as in his own bed. We need but recall how our soldiers with this fever so well bore even the rude transportation of the war, to know that such journeys may be safely made. One of my own patients, a few years since, though at the beginning of the third week of this fever, came safely through in a sleeping-car from Cincinnati to Philadelphia,—a journey of more than seven hundred miles,—and certainly without any aggravation of the disease, from which she happily recovered. I would therefore strongly urge that, if he be at all near the line of a railway, or if there be no very rough road to travel over, the typhoid-fever patient should be brought to his home at the very earliest suspicion of the disease. But his ticket of travel should be a through one, —there should be no stopping by the way.

I read in the text-books and in the journals of various special remedies for typhoid fever, among which are carbolic acid, tinc-

ture of iodine, nitrate of silver, salicylic acid, large doses of calomel, and calcium sulphide. Some of these are recommended by men whose experience is a large one, and in whose judgment I have entire confidence. I do not doubt the correctness of their statements, although I have no personal experience with these medicines. But for myself I am bound to say, that whatever of success I have met with in the treatment of typhoid fever has been in direct proportion to the simplicity of that treatment. Attention to minuteness of detail, both in what I do myself and in what I order to be done by others, frequent visits to the sick, constant vigilance with respect to diet, the avoidance of all harsh and dangerous drugs, and the use of such simple medication as has here been indicated, have, in their results, been sufficient to satisfy me in the past and to make me hopeful for the future.

